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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,463	04/23/2007	Lawrence Carl Crees	X-9549	2549
7590 Champions Business Park Arrowbrook Road Upton, Wirral, CH49 0AB UNITED KINGDOM				
EXAMINER HENKEL, DANIELLE B				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
04/15/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,463

Applicant(s)

CREES ET AL.

Examiner

DANIELLE HENKEL

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Summary

1. This is the initial office action in the case 10/574463 filed 4/23/07.
2. Claims 1-39 are pending and have been fully considered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 11 recites the limitation "the axis" in line 3. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 35 recites the limitation "the unit" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
9. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over COPELAND (US 2002/0114733) in view of BARBERA-GUILLEM (US 2003/0040104).
- a. With respect to claim 1, COPELAND teaches an apparatus for processing biological materials comprising a plurality of stacked, rotatable platforms, the apparatus having a first dispensing member mounted for dispensing reagent and/or a sample to a sample receiving area on a first stacked platform (0057-0058) COPELAND does not explicitly disclose each platform having a plurality of sample receiving areas. However, BARBERA-GUILLEM teaches an apparatus for processing biological materials, the apparatus comprising a plurality of staked, rotatable platforms, each platform having a plurality of sample receiving areas located thereon (0038-39) and each platform being rotatable to move sequential sample receiving areas thereon into the appropriate orientation

(0039). At the time of the invention it would have been obvious to modify the apparatus of COPELAND to include multiple sample platforms in a rack system as taught by BARBERA-GUILLEM because it allows for high-throughput cell culture by accommodating a plurality of cell culture devices, and allows for all operations to take place in a closed environment (0007-0010 and 0004). In modifying COPELAND with BARBERA-GUILLEM it would be obvious to duplicate the reagent dispensing system of COPELAND to create a second dispensing member mounted for dispensing reagent and/or a sample to a sample receiving area on a second stacked platform, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

b. With respect to claim 2, as mentioned above, in COPELAND modified by BARBERA-GUILLEM it would be obvious to one of ordinary skill in the art at the time of the invention to duplicate the reagent dispensing system of COPELAND to create a third dispensing member mounted for dispensing reagent and/or a sample to a sample receiving area on a third stacked platform, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

c. With respect to claim 3, the above combination of COPELAND and BARBERA-GUILLEM teaches each stacked platform has an associated dispensing member mounted for dispensing reagent and/or a sample to a sample receiving area on each stacked platform (see claim 1).

- d. With respect to claim 4, BARBERA-GUILLEM teaches a removing member for removing process waste from the sample receiving area (0050 and 0060).
- e. With respect to claim 5, BARBERA-GUILLEM teaches the apparatus is substantially contained within a releasably sealed housing (0037).
- f. With respect to claim 6, BARBERA-GUILLEM teaches the housing is connected to an air extraction means (0037).
- g. With respect to claim 7, BARBERA-GUILLEM teaches the platforms are rotatable around a common axis (0039).
- h. With respect to claim 8, BARBERA-GUILLEM teaches the platforms rotate in unison (0039).
- i. With respect to claim 9, COPELAND teaches the platforms rotate independently (0072, 0080).
- j. With respect to claim 10, BARBERA-GUILLEM teaches the platforms are substantially horizontal and are stacked above one another vertically (0038 and Figure 3).
- k. With respect to claim 11, BARBERA-GUILLEM teaches the platform has one or more slots disposed from the edge of the platform to the center (0038).
- l. With respect to claim 12, BARBERA-GUILLEM teaches each platform is substantially circular or octagonal in shape (Figure 3).
- m. With respect to claim 13, COPELAND teaches the sample receiving area is angled to allow liquid to collect at one part of the sample (0068) but does not

explicitly disclose the angle in the range of 2-25 degrees. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose this angle, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

n. With respect to claim 14, BARBERA-GUILLEM teaches the apparatus containing multiple platforms (Figure 3), but does not explicitly disclose the range of 4 to 10 platforms. At the time of the invention it would have been obvious to one of ordinary skill in the art to use 4 to 10 platforms, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

o. With respect to claim 15, BARBERA-GUILLEM teaches the removing member comprises one or more tubes (0051).

p. With respect to claim 16, BARBERA-GUILLEM teaches the tubes but does not explicitly disclose the tube is aluminum with a PTFE coated interior. At the time of the invention it would have been obvious to one of ordinary skill in the art to choose aluminum with PTFE coated tubes, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

q. With respect to claim 17, BARBERA-GUILLEM teaches the tubes but does not explicitly disclose the tube a PTFE tube oriented within an aluminum tube. At the time of the invention it would have been obvious to one of ordinary skill in the art to choose a PTFE tube within an aluminum tube, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

r. With respect to claim 18, BARBERA-GUILLEM teaches the sample receiving area moves vertically relative to the removing member (0050). At the time of the invention it would be an obvious substitution to one of ordinary skill in the art to make the removing member move vertically relative to the sample receiving area.

s. With respect to claim 19, BARBERA-GUILLEM teaches the tubes are separate and dispense different reagents (0048, 0050, and Figure 2).

t. With respect to claim 20, BARBERA-GUILLEM teaches the reagents are dispensed and/or the waste material removed by means of pumps, but does not explicitly disclose peristaltic pumps. At the time of the invention it would have been obvious to one having ordinary skill in the art to choose peristaltic pumps as a specific type of pump for fluid transport through a tube as in BARBERA-GUILLIEM.

u. With respect to claim 21, COPELAND teaches feet on the reagent support to keep it in a predetermined orientation (0092-94). At the time of the invention it

would have been obvious to one of ordinary skill in the art to also use these feet on the apparatus housing to allow the apparatus to be positioned in a specific orientation.

v. With respect to claim 22, BARBERA-GUILLEM teaches the samples are held in one or more holding means consisting of a culture chamber (0033).

w. With respect to claim 23, BARBERA-GUILLEM teaches the samples have an identification means disposed thereon (0059).

x. With respect to claim 24, BARBERA-GUILLEM teaches the identification means consists of a bar code (0059).

y. With respect to claim 25, BARBERA-GUILLEM teaches the apparatus includes a sensor for detecting the presence of a sample and/or identifying the sample (0059).

z. With respect to claim 26, BARBERA-GUILLEM teaches the sensor is taken from a group consisting of an optical sensor, a magnetic sensor, a laser scanner, and a radio transmitter receiver (0059).

aa. With respect to claim 27, BARBERA-GUILLEM teaches the apparatus further comprises a sensor for detecting characteristics of the processed biological material (0065).

bb. With respect to claim 28, BARBERA-GUILLEM teaches the apparatus further comprises a UV light source (0066).

cc. With respect to claim 29, BARBERA-GUILLEM teaches an air conditioning means (0050).

- dd. With respect to claim 30, the air conditioning means of BARBERA-GUILLEM can be used for drying samples (0050).
- ee. With respect to claim 31, BARBERA-GUILLEM teaches the apparatus further comprises a turbidity monitor for assessing the turbidity (light transmission) of a sample (0061).
- ff. With respect to claim 32, BARBERA-GUILLEM teaches the removing member is connected to a waste tank or a waste disposal device (0060).
- gg. With respect to claim 33, BARBERA-GUILLEM teaches an electronic control unit/central processing unit controls said apparatus (0062).
- hh. With respect to claim 34, BARBERA-GUILLEM teaches the electronic control unit/ central processing unit is programmable (0062).
- ii. With respect to claim 35, BARBERA-GUILLEM teaches the sensor is adapted to relay information to the unit (0062).
- jj. With respect to claim 36, BARBERA-GUILLEM teaches the control unit can interface with a printer and/or a computer (0062).
- kk. With respect to claim 37, BARBERA-GUILLEM teaches the apparatus can process a wide range of samples from 10 to 1000 samples, preferably at least 50 samples (0038), but does not explicitly disclose approximately 65 samples. At the time of the invention it would have been obvious to one of ordinary skill in the art to process approximately 65 samples, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the

optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

ll. With respect to claim 38, BARBERA-GUILLEM teaches the apparatus is used for processing biological material for cytogenetic analysis (0063-64).

mm. With respect to claim 39, BARBERA-GUILLEM teaches the apparatus is used for processing surface culture cells in order to analyze the chromosomes associated with the cells (0057 and 0064).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE HENKEL whose telephone number is (571)270-5505. The examiner can normally be reached on Mon-Thur: 7:30am-5pm, Alternate Fridays: 7:30am-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/
Primary Examiner, Art Unit 1797

/DANIELLE HENKEL/
Examiner, Art Unit 1797